CLAIMS

1. A high-strength aluminum alloy fin material for heat exchangers having high strength and excelling in thermal conductivity, erosion resistance, sag resistance, sacrificial anode effect and self-corrosion resistance, characterized by comprising 0.8-1.4 wt% of Si, 0.15-0.7 wt% of Fe, 1.5-3.0 wt% of Mn and 0.5-2.5 wt% of Zn, further having Mg as an impurity limited to 0.05 wt% or less and the remainder consisting of the usual impurities and Al; and having a tensile strength before brazing of 240 MPa or less; and a tensile strength after brazing of 150 MPa or more.

2. A high-strength aluminum alloy fin material for heat exchangers having high strength and excelling in thermal conductivity, erosion resistance, sag resistance, sacrificial anode effect and self-corrosion resistance, characterized by comprising 0.8-1.4 wt% of Si, 0.15-0.7 wt% of Fe, 1.5-3.0 wt% of Mn and 0.5-2.5 wt% of Zn, further having Mg as an impurity limited to 0.05 wt% or less and the remainder consisting of the inevitable impurities and Al; and having a tensile strength before brazing of 240 MPa or less; a tensile strength after brazing of 150 MPa or more; and a recrystallized grain size after brazing of 500 μm or more.

3. A method of producing a high-strength aluminum alloy fin material for heat exchangers having a tensile strength before brazing of 240 MPa or less and a tensile strength after brazing of 150 MPa or more, characterized by pouring a melt comprising 0.8-1.4 wt% of Si, 0.15-0.7 wt% of Fe, 1.5-3.0 wt% of Mn and 0.5-2.5 wt% of Zn, further having Mg as an impurity limited to 0.05 wt% or less and the remainder consisting of the inevitable impurities and Al; continuously casting thin slabs that are 5-10 mm thick by means of a twin belt casting machine and winding them into rolls; cold rolling to a sheet thickness of 0.05-0.4 mm; performing an inter anneal at a temperature of 350-500 °C; and cold rolling at a cold reduction rate of 10-50% to a final sheet thickness of 40-200 μm.

4. A method of producing a high-strength aluminum alloy fin material for heat exchangers having a tensile strength before brazing of 240 MPa or less and a tensile strength after brazing of 150 MPa or more, characterized by pouring a melt comprising 0.8-1.4 wt% of Si, 0.15-0.7 wt% of Fe, 1.5-3.0 wt% of Mn and 0.5-2.5 wt% of Zn, further having Mg as an impurity limited to 0.05 wt% or less and the remainder consisting of the inevitable impurities and Al; continuously casting thin slabs that are 5-10 mm thick by means of a twin belt casting machine and winding them into rolls; cold rolling to a sheet thickness of 0.08-2.0 mm; performing a inter anneal at a temperature of 350-500 °C; cold rolling at a cold reduction rate of 50-96% to a final sheet thickness of 40-200 μm; then performing a final anneal at a temperature of 300-400 °C.

5. A method of producing a high-strength aluminum alloy fin material for heat exchangers in accordance with claim 4, characterized in that said inter anneal at 350-500 °C is performed in a continuous annealing furnace with a heating rate of 100 °C/min or more and a holding (retention) time of 5 minutes or less.